

REMARKS

Applicants respond herein to each of the issues raised in the Final Action. Applicants appreciate the indication of allowance of Claims 5-20 in the Final Action. However, Applicants submit that the rejections of Claims 1-4 should be withdrawn for at least the reasons more fully discussed below.

Rejections Under Section 102:

Claim 1 is rejected under 35 U.S.C. § 102 as being anticipated by United States Patent Publication No. 20040113232 to Johnson *et al.* ("Johnson"). Final Action, p. 2. Claims 1-3 are rejected under 35 U.S.C. § 102 as being anticipated by United States Patent Publication No. 20040113181 to Wicker ("Wicker"). Final Action, p. 3. Claim 4 is rejected under 35 U.S.C. § 102 as being anticipated by (or in the alternative obvious over) Wicker. Final Action, p. 4. Under 35 U.S.C. § 102, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131 (quoting *Verdegaal Bros. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987)). "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" M.P.E.P. § 2112 (citations omitted) (emphasis added).

In rejecting Claim 1 over Johnson, the Final Action asserts, among other things, that, while current density concentration is not "explicitly" disclosed, the Johnson "structure warrants the limitation." Final Action, p. 3. In addition, the term recess "is interpreted broadly" in the rejection. Final Action, p. 2. Applicants submit that, given this broad interpretation of recess, the assertion that current density concentration is disclosed inherently by Johnson is unfounded. The term concentration clearly indicates some form of focusing or direction of the current. *See, e.g.*, Webster's Collegiate Dictionary, p. 238 (copy attached hereto). However, in the structure of Johnson, a cup shaped electrode 140 surrounds the memory material 130 "which may provide improved heating efficiency or more uniform heat

delivery for phase switching of memory material 130." Johnson, Paragraph 56. Johnson further states that its "'oven cell' design may enable the majority or the full volume of memory material 130 to be switched." Johnson, Paragraph 57. Accordingly, Johnson clearly does not inherently disclose current density concentration. In fact, it teaches away from such concentration. The rejection of Claim 1 based on Johnson should be withdrawn for at least these reasons.

The rejection of Claim 1 based on Wicker similarly is based on recess being "interpreted broadly" and current density concentration being allegedly disclosed because "the structure warrants the limitation." Final Action, p. 3. Even this broad interpretation of "recess" as "the space occupied by 130 [sic]," Final Action, p. 3, depends on the assertion that the "two electrodes 130 and 140" of Wicker together disclose a first electrode. Wicker, Paragraph 25; Final Action, p. 3 ("a first electrode (130/140)"). However, as is clear from the description of Wicker, 130 and 140 are separate electrodes with the phase change material 120 therebetween. Thus, they are, if anything, analogous to the first electrode of Claim 1 and the second electrode of Claim 3. As such, neither of the electrodes 130, 140 of Wicker discloses an electrode having a recess therein. Accordingly, the rejection of Claim 1 and the claims that depend therefrom based on Wicker should be withdrawn for at least these reasons.

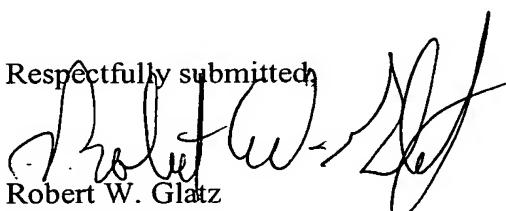
In addition, the assertion that current concentration is inherent in the structure of Wicker is similarly unwarranted. When properly understood as providing for current flow to heat the phase change material 120 between the respective electrodes 130 and 140, Applicants submit that there is no basis for concluding any such concentration would be provided by the structure of Wicker, nonetheless inherent in that structure. Accordingly, the rejection of Claim 1 and the claims that depend therefrom based on Wicker should also be withdrawn for at least these additional reasons.

Applicants submit that the rejection of Claim 1 should be withdrawn for at least these reasons. The rejections of Claims 2-4 should be withdrawn at least based on their dependence from Claim 1. Applicants request that the Examiner reconsider the rejections in light of the comments above. Applicants further note that the rejected dependent claims are also separately patentable. For example, the Final Action asserts that the conductor 690 of Wicker discloses the second electrode of Claim 3. Final Action, p. 4. Applicants submit that the conductor 690 of Wicker is not structured as an electrode and Claim 3 is separately patentable for at least these reasons.

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Conclusion

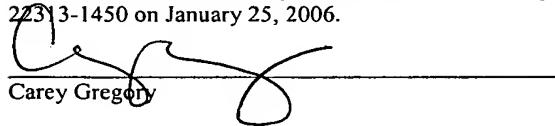
In view of the above, Applicants submit that the pending claims are in condition for allowance and respectfully request allowance of the present application. If further informalities are noted, the Examiner is encouraged to contact the undersigned by telephone to expedite allowance of the present application.

Respectfully submitted,

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con amo-re \kän'-ə-'môr-ē, kän-ə-'môr-(ē), -'môr-\ *adv* [It] (1739) 1 : with love, devotion, or zest 2 : in a tender manner — used as a direction in music
con ani-ma \kän'-ə-nä-mä, kän'-ä-ni-\ *adv* [It, lit., with spirit] (ca. 1906) : in a spirited manner — used as a direction in music
con-na-tion \kō-'nä-shän\ *n* [L *conation-*, *conatio* act of attempting, fr. *conari* to attempt — more at DEACON] (ca. 1837) : an inclination (as an instinct, a drive, a wish, or a craving) to act purposefully : IMPULSE 3 — *co-na-tive* \kō-nä-tiv\, kā-, kän-\ *adj*
con bri-o \kän'-brē-ō, kän-\ *adv* [It, lit. with vigor] (ca. 1889) : in a vigorous or brisk manner — used as a direction in music
con-ca-na-val-i-n \kän-ka-'na-vä-län\ *n* [com- + *canavalia*, a noncrystalline globulin found in the jack bean, fr. NL *Canavalia*, genus name of the jack bean] (1917) : either of two crystalline globulins occurring in the jack bean; esp : one that is a potent hemagglutinin
'con-cat-e-nate \kän'-ka-tä-nat, kän-\ *adj* [ME, fr. LL *concatenatus*, pp. of *concatenare* to link together, fr. L *com-* + *catena* chain] (15c) : linked together
concatenate \kän'-nät\ *vt* -*nat-ing* (1598) : to link together in a series or chain — *con-cat-e-nation* \(\kän-ka-tä-'nä-shän, kän-\) *n*
con-cave \kän'-käv, kän-\ *adj* [ME, fr. MF, fr. L *concavus*, fr. *com-* + *cavus* hollow — more at CAVE] (15c) 1 : hollowed or rounded inward like the inside of a bowl 2 : arched in : curving in — used of the side of a curve or surface on which neighboring normals to the curve or surface converge and on which lies the chord joining two neighboring points of the curve or surface
'con-cave \kän'-käv\ *n* (1552) : a concave line or surface
con-cav-i-ty \kän'-ka-vä-tē, n, pl -*ties* (15c) 1 : a concave line, surface, or space : HOLLOW 2 : the quality or state of being concave
con-ca-vo-con-veX \kän'-kä-vö-kän'-veks, kän-, kän-\ *adj* (1676) 1 : concave on one side and convex on the other 2 : having the concave side curved more than the convex (a ~ lens)
con-ceal \kän'-sé(-əl)\, vb [ME *conceulen*, fr. MF *conceler*, fr. L *concelare*, fr. *com-* + *celare* to hide — more at HELL] (14c) 1 : to prevent disclosure or recognition of 2 : to place out of sight *syn* see HIDE
con-ceal-a-ble \kän'-sé-lə-bəl\ *adj* — *con-ceal-er* \-sé-lər\ *n* — *con-ceal-ing* \-sé-lən'-gəl\ *n*
con-cede \kän'-sé-də, vb *con-ced-ed*; *con-ced-ing* [F or L; F *concéder*, fr. L *concedere*, fr. *com-* + *cedere* to yield] *vt* (1632) 1 : to grant as a right or privilege 2 : a : to accept as true, valid, or accurate (the right of the state to tax is generally conceded) b : to acknowledge grudgingly or hesitantly ~vi : to make concession : YIELD *syn* see GRANT
con-ced-ed-ly \-sé-dəd-lē\ *adv* — *con-ced-er* *n*
con-ceit \kän'-sét\ *n* [ME, fr. *conceiven*] (14c) 1 a : (1) a result of mental activity : THOUGHT (2) : individual opinion b : favorable opinion; esp : excessive appreciation of one's own worth or virtue 2 : a fancy article 3 a : a fanciful idea b : an elaborate or strained metaphor c : use or presence of such conceits in poetry d : an organizing theme or concept (found his ~ for the film early — Peter Wilkinson)
conceit vt (1597) 1 *obs* : CONCIEVE, UNDERSTAND 2 *chiefly dial* : IMAGINE 3 *dial Brit* : to take a fancy to
con-ceit-ed \-sé-təd\ *adj* ['conceit'] (1593) 1 : ingeniously contrived : FANCIFUL 2 : having an excessively high opinion of oneself — *con-ceit-ed-ly* *adv* — *con-ceit-ed-ness* *n*
con-ceiv-a-ble \kän'-sé-vä-bəl\ *adj* (15c) : capable of being conceived : IMAGINABLE — *con-ceiv-a-bil-i-ty* \kän'-sé-vä-bi-lə-tē, n — *con-ceiv-a-ble-ness* \-sé-vä-bəl-nəs\ *n*
con-ceiv-a-bly \-blē\ *adv* (1625) 1 : in a conceivable manner 2 : it may be conceived : POSSIBLY
con-ceive \kän'-sé-vē\ *vb* *con-ceived*; *con-ceiv-ing* [ME, fr. MF *conceire*, fr. L *concipere* to take in, conceive, fr. *com-* + *capere* to take — more at HEAVE] *vt* (14c) 1 a : to become pregnant with (young) b : to cause to begin : ORIGINATE 2 a : to take into one's mind (~ a prejudice) b : to form a conception of : IMAGINE 3 : to apprehend by reason or imagination : UNDERSTAND 4 : to be of the opinion (~ vi 1 : to become pregnant 2 : to have a conception — usu. used with of (~ s of death as emptiness) *syn* see THINK — *con-ceiv'er* *n*
con-cel-e-brant \kän'-sé-lə-bränt, kän-, kän-\ *n* (ca. 1931) : one that celebrates a Eucharist or Mass
con-cel-e-brate \kän'-sé-lə-brät, kän-\ *vb* [ML *concelebratus*, pp. of *concelebrare*, fr. L, to frequent, celebrate, fr. *com-* + *celebrare* to celebrate] *vt* (1879) : to participate in (a Eucharist) as a joint celebrant who recites the canon in unison with other celebrants ~vi : to participate as a celebrant in a concealed Eucharist — *con-cel-e-bration* \(\kän-ə-sé-lə-brä-shän, kän-\) *n*
con-cen-tent \kän'-sént\ *n* [L *concentus*, fr. *concincere* to sing together, fr. *com-* + *canere* to sing — more at CHANT] (1585) *archaic* : HARMONY
con-cen-ter \kän'-sén-tər, kän-\ *vb* [F *concentrer*, fr. *com-* + *centre* center] *vt* (1598) : to draw or direct to a common center : CONCENTRATE ~vi : to come to a common center
'con-cen-trate \kän'-tə-sé-nä-tät, -sé-nä-\ *vb* -*trat-ed*; -*trat-ing* [com- + L *centrum* center] *vt* (1646) 1 a : to bring or direct toward a common center or objective : FOCUS b : to gather into one body, mass, or force (power was concentrated in a few hands) c : to accumulate (a toxic substance) in bodily tissues (fish ~ mercury) 2 a : to make less dilute (~ syrup) b : to express or exhibit in condensed form ~vi 1 : to draw toward or meet in a common center 2 : GATHER, COLLECT 3 : to concentrate one's powers, efforts, or attention (~ on a problem) — *con-cen-trat-ed-ly* \-trä-täd-lē, kän'-tə-sən-'trä-\ *adv* — *con-cen-tra-tive* \-trä-tiv\ *adj*
'concentrate *n* (1883) 1 : something concentrated: as a : a mineral-rich product obtained after an initial processing of ore b : a food reduced in bulk by elimination of fluid (orange juice ~) 2 : a feed-stuff (as grains) relatively rich in digestible nutrients — compare FIBER
con-cen-tra-tion \kän'-tə-sən-'trä-shän, -sən-\ *n* (1634) 1 a : the act or process of concentrating : the state of being concentrated; esp : direction of attention to a single object b : MAJOR 4a 2 : a concentrated mass or thing 3 : the amount of a component in a given area or volume
concentration camp *n* (1901) : a camp where persons (as prisoners of war, political prisoners, or refugees) are detained or confined
con-cen-tra-tor \kän'-tə-sən-trä-tör\ *n* (1833) : one that concentrates: as a : an industrial plant that produces concentrates from ores b : a

mirror or group of mirrors that focus sunlight for use source e : a device in a computer network that collects separate low-volume transmission channels and retransmits single high-volume channel
con-cen-tric \kän'-sen-trik, kän-\ *adj* [ML *concentricus*, *centrum* center] (14c) 1 : having a common center 2 : having a common axis : COAXIAL — *con-cen-tric-al-ly* \-kän'-sen-tri-sä-tē\ *adv*
con-cep-t \kän'-sep\ *n* [L *conceptum*, neut. of *conceptus* *ciptus* to conceive — more at CONCEIVE] (1556) 1 : so conceived in the mind : THOUGHT, NOTION 2 : an abstract or generalized from particular instances *syn* see IDEA
con-cep-ta-ble \kän'-sep-tä-kəl\ *n* [NL *conceptum*, fr. fr. *conceptus*, pp. of *concipere* to take in] (1835) : an entity containing reproductive cells in algae (as of the genus *Fucus*)
con-cep-tion \kän'-sep-shän\, n [ME *conceptioun*, fr. OF *conception*, *conceptio*, fr. *concipere*] (14c) 1 a : (1) coming pregnant : the state of being conceived (2) : BEGINNING (joy had the like ~ in our eyes —Shak.) 2 : capacity, function, or process of forming or understanding abstractions, or their symbols b : a general idea : CONCEPTUAL product of abstract or reflective thinking d : a person's ideas and beliefs concerning something 3 : the something in the mind *syn* see IDEA — *con-cep-tic* \-shō-nəl\ *adj* — *con-cep-tive* \-sep-tiv\, *adj*
con-cep-tu-al \kän'-sep-chä-wäl, kän-, -chäl, -shwäl\ *adj* [alias of thought, fr. LL *conceptus* act of conceiving, thought, *ciptus*] (ca. 1834) : of, relating to, or consisting of conceptual art ~ *con-cep-tu-al-i-ty* \-sep-chä-wä-lə-tē, -sha-\ *n* — *con-cep-tu-al* conceptual art *n* (ca. 1969) : an art form in which the artist ~ to convey a concept rather than to create an art object — artist *n*
con-cep-tu-al-ise *Brit var of CONCEPTUALIZE*
con-cep-tu-al-ism \-sep-chä-wä-li-zam, -cha-li-, -shwäl-\ *n* (1838) : a theory in philosophy intermediate between realism that universals exist in the mind as concepts of d predicates which may be properly affirmed of reality — *con-cep-tu-al-ist* \-sep-chä-wä-li-zət\ *n* : of, relating to, or consisting of conceptual art — *con-cep-tu-al-i-ty* \-sep-chä-wä-lə-tē, -sha-\ *n* — *con-cep-tu-al* conceptual art *n* (ca. 1969) : an art form in which the artist ~ to convey a concept rather than to create an art object — artist *n*
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concern *n* (1655) 1 a : marked interest or regard through a personal tie or relationship b : an uneasy sense of interest, uncertainty, and apprehension 2 : something that belongs to one : AFFAIR 3 : matter for consideration 4 : action or establishment for business or manufacture 5 : GADGET *syn* see CARE
concerned *adj* (1656) 1 a : ANXIOUS, WORRIED (~ for tl : INTERESTED (~ to prove the point) 2 a : interested: with books and music) b : culpably involved : IMPLICATED all ~)
concerning *prep* (15c) : relating to : REGARDING
con-cern-ment \kän'-sən-mənt\ *n* (1610) 1 : something concerned 2 : IMPORTANCE, CONSEQUENCE 3 : archive : PARTICIPATION 4 : SOLICITUDE, ANXIETY
con-cert \kän'-sərt, kän'-sär\, vb [F, It *concerto*, (1674) 1 *obs* : musical harmony : CONCORD 2 a : a sign or plan : union formed by mutual communication c views b : a concerted action (the sacrifice was hailed adj — in concert : TOGETHER
con-cert \kän'-sərt\, vb [MF *concerter*, fr. OIt *concertare*, + *certo* certain, decided, fr. L *certus* — more at CERTAIN] 1 : to settle or adjust by conferring and reaching an agreement their differences 2 : to make a plan for (~ measures poor) ~vi : to act in harmony or conjunction
con-cert-ed \kän'-sər-təd\ *adj* (1716) 1 a : mutually agreed on (~ effort) b : performed in unison (~ art : arranged in parts for several voices or instruments — c adv — *con-cert-ed-ness* *n*
con-cert-goer \kän'-tə-sər-gō(-ə)r, kän'-sər-, gō-\ *n* (185 frequently attends concerts — *con-cert-go-ing* \-gō-in, adj
concert grand *n* (ca. 1891) : a grand piano of the largest in volume, timbre, and brilliance of tone to concert use
con-cert-tina \kän'-tə-sər-tē-nə\, n [prob. fr. 'concert + suffix] (1837) 1 : a musical instrument of the accordion coiled barbed wire for use as an obstacle — called also *concertina* *n* (1801) 1 : the solo instruments in a concerto grosso 2 *certo*
con-cert-i-ze \kän'-tə-sər-tiz\, vi -ized; -iz-ing (1883) professionally in concerts
con-cert-mas-ter \kän'-tə-sər-məstər\ or *con-cert-mstar* \kän'-tə-sər-mstar\ [G *Konzertmeister*, fr. *Konzert* concert + *Mester* 1889] : the leader of the first violins of an orchestra as usu. the assistant to the conductor
con-ter-to \kän'-cher-(ə)tō\ also -char-\, n, pl -ti \(-tō) *n* (1730) : a piece for one or more soloists with three contrasting movements